

# Job Description

## Support Scientists for “Beamline for Schools”

CERN will organize another Beamline for Schools (BL4S) competition. Details about the previous editions can be found at <http://cern.ch/BL4S>.

Teams of high-school students from around the world can make a proposal for an experiment at the T9 beam line of the PS accelerator. The proposals will be evaluated by a committee of experienced physicists and two winning teams will be nominated.

In the framework of this project, CERN is looking for two young researchers (physicists, computer scientists, or engineers).

The candidates will be responsible for the preparation and running of the winners' experiments.

In particular, the candidates will be:

- answering technical questions of participating teams,
- participating in the selection process that leads to the nomination of the winners,
- implementing the proposals of the winners into experiments that can actually be performed at the T9 beamline of the PS accelerator,
- training the winners (once they are at CERN) on how to run the experiment and analyse the data,
- responsible for the actual running of the experiment, and
- helping the winners with the post-processing of their data and the writing of a paper or article.

The main task will be setting up the TDAQ system of the experiments on the basis of the software that has been developed earlier. Depending on the selected experiments, the candidates will have to:

- develop additional S/W in C,
- develop code for the data analysis using C and Root,
- test and calibrate detectors,
- integrate the detectors with the software and test the overall system, and
- install the detectors, electronics, and computers in the T9 beam line and debug and commission the system.

During the running of the experiments (two weeks in September) the successful candidates will be fully responsible for the overall performance of the experiments and will help the winning teams to achieve their scientific goals.

In order to fulfil this role, the candidates have to have a solid background in particle physics, computing science, or electronics. Experience with small scale experiments resp. testbeam setups would be an advantage. In addition, the candidates should have basic skills in software development and project management.

The successful candidates will work together as a team. In addition, the BL4S project manager as well as experts from CERN will provide help. Furthermore, a lot of documentation is available from previous years.

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